

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
INSPECTION REPORT

EPA Region 5 Records Ctr.



288564

USEPA Number: 1LD001233714

IEPA Number: 0316550004

Facility Name: PVS CHEMICALS INC. / ALLIED CHEMICAL CORP.

Street: 12260 South Carolanet Ave.

City: Chicago Telephone: (312) 933-8200

County: Cook State: IL Zip Code: 60633

Type of Facility: Notified as: G-TREAT/S Regulated as: (S)
LDF? YES HPV? NO 90 Day Follow-up required? Yes: No: X

Region: MAYWOOD Date of Inspection: MAY 5, 1989 From: 9:30am to: 1:00pm
Weather (LDF Only): 60°F SUNNY

Type of Inspection

ISS: X Sampling: Citizen Complaint: Closed: Other:
Record Review: Follow-up to Inspection of: Withdrawal:

Non Regulated Status

SOG: Claimed Nonhandler: Other (Specify in Narrative): X

Notification date, 11/12/80, from (initial) or 6/22/82 (subsequent) Notif.

Part A

Initial Part A date: 11/14/80 Amended: 6/27/86
Part A Withdrawal requested: 8/19/88 Approved by (US)(IL)EPA:

Part B Permit Application

Part B Permit called by (US)(IL)EPA on: 4/85 Permit Due: 10/85
Part B Permit Submitted: NO Draft Permit Issued:

Enforcement

Has the firm been referred to: USEPA? Y IAG? N County SA? N
Date(s) of initial referral: 2/28/86
USEPA CACO: 6/30/86 CAFO: 1/11/89 ALJ Decision:
Referral to DOJ by USEPA: Federal Court Order Issued:
PCB Order Issued: State Court Order Issued:

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TSD Facility Activity Summary

Activity By Process Code	On Pt A?	Activity Conducted Prior to 1980?	Was Activity Ever Done?	Closed	Being Done at Time of Insp?	Exempt per 35 IAC, Sec.	On Annual Report
S01	*	?	NO	NO	NO	NO	NA NA NA
S02	*	?	NO	NO	NO	NO	NA NA NA
T04	*	YES	NO	NO	NO	725.101(a)(10)	NA NA NA
S04	Y	YES	YES	**	NO	NO	NA NA NA
T01	*	YES	YES	YES	NO	N/A	NA NA NA
** CLOSURE ACTIVITIES WERE COMPLETED - AWAITING CLOSURE							

CERTIFICATION BY PERMITS SECTION
* NOT ON AMENDED PART A

Person: PKS Chemicals Inc. (Illinois) Telephone #: 933-8800
Street: 12260 S. Carondelet Ave.
City: Chicago State: IL Zip Code: 60633
Owner: PKS CHEMICALS INC. Telephone #: 921-9200
Street: 1100 Harbor Ave.
City: Detroit State: MICH Zip Code: 48213

Person Interviewed	Title	Telephone #
<u>DALE SMYSER</u>	<u>PLANT MANAGER</u>	<u>933-8800</u>
<u>JOHN HORA</u>	<u>Technical Supervisor</u>	<u>933-8800</u>

Inspection Participants	Agency/Title	Telephone #
<u>Carol Grasser</u>	<u>IEPA/ERS</u>	<u>345-9780</u>
<u>Chuck Grutman</u>	<u>IEPA/ERS</u>	<u>"</u>
<u>Michelle Underwood</u>	<u>IEPA/LSCT</u>	<u>"</u>
<u>LAURA TAVARES</u>	<u>IEPA/LSCT</u>	<u>"</u>

Prepared By	Agency/Title	Telephone #
<u>Carol Grasser</u>	<u>IEPA/ERS</u>	<u>345-9780</u>

Summary of Apparent Violations

Area	Class	Section
THERE WERE NO		

Area	Class	Section
APPARENT VIOLATIONS		

Area	Class	Section
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WASTE DISPOSITION FORM

Facility Name: PVS CHEMICALS INC (Illinois)USEPA #: ILD0001833714IRPA #: 031655

Waste Name (Include haz & non-haz special & waste for which no determination has been made)	Generating Process (For waste gen. on site. N/A for TSD)	Date of Last Analysis	USEPA Haz Waste #	On 8700-12 *	On 3610-3 *	On Annual Rpt. for 88 87 86 *	Amount on Site	Rate of Generation	Last Manifested Ship-ment	Disposition
ACIDIFIED WATER	WASH WATER FROM ACID TANKS/PIPES/TANKER TRUCKS		D002	Y	Y	N/A N/A N/A	NONE	APPROX 10,000 GALS PER DAY	NOT SHIPPED OFF SITE	pH adjusted prior to pumping to surface impoundment
FILTER CARTRIDGES	FILTERS OUT SOLIDS FROM FINAL ACID PRODUCT		D002	Y	Y	N/A N/A N/A	SEVERAL BEING REUSED IN CONTAINER	APPROX 250 YEARLY	NOT SHIPPED OFF SITE	NEUTRALIZED ON SITE
ALUMINUM CHLORIDE FILTER CAKE	IRON FILTERED OUT OF ALUMINUM CHLORIDE. NEUTRALIZED		D002	Y	Y	N/A N/A N/A	IMMEDIATELY NEUTRALIZED	VARIES	NOT SHIPPED OFF SITE	NEUTRALIZED ON SITE
FERRIC HYDROXIDE SLUDGE	SLUDGE FROM THE SURFACE IMPOUNDMENT WHERE IRON SOLIDS SETTLED FROM THE WATER		NON HAZ	N/A	N/A	N/A N/A N/A	APPROX 1000 CUBIC YARDS	APPROX 10 CUBIC YARDS LAST SHIPMENT	6-17-88	LAND FILLED AT CIO
NEUTRALIZED FILTER CARTRIDGES	ELEMENTARY NEUTRALIZATION OF D002 FILTER CARTRIDGES		NON HAZ	N/A	N/A	N/A N/A N/A	NONE	APPROX 250 YEARLY	NOT SHIPPED OFF SITE	DISPOSED OF IN GENERAL REFUSE DUMPSTER
WASTE OIL	EQUIPMENT MAINTENANCE	10-10-88	NON HAZ	N/A	N/A	N/A N/A N/A	3 DRUMS	APPROX 6 DRUMS YEARLY	10-13-88	Reclaimed by Safety Klean in Griffith Indiana
ALUMINUM CHLORIDE FILTER CAKE	NEUTRALIZED FILTER CAKE		NON HAZ	N/A	N/A	N/A N/A N/A	APPROX 20 CUBIC YARDS	VARIES	8-17-88	LAND FILLED AT CIO

NARRATIVE

PVS Chemical Company (Illinois) is a manufacturer of sulfuric acid. They also produce Aluminum Chloride which is used in deodorants, antacids, photography and water treatment; Sodium Bisulfite which is intentionally manufactured and also a by-product of the air emission scrubbers; Sodium Thiosulfate which is bisulfite with sulfur added; Sulfam which is liquid sulfuric acid and used in soaps; and Oleum which is sulfuric acid that fumes and has a pH of almost 0.

PVS purchased the facility in 1981 from Allied Chemical Corporation. The property has been in industry since the 1800's. The facility notified as a generator of hazardous waste and their Part A indicates that they are a storage and treatment facility. The hazardous wastes generated by PVS are hazardous only because they exhibit the characteristic of corrosivity. These wastes are treated using elementary neutralization prior to being stored. This process is RCRA exempt.

PVS has requested the withdrawal of its Part A and has completed closure activities for its surface impoundment. High levels of lead have been discovered under the surface impoundment and in other locations around the impoundment. PVS maintains that the lead is from a past lead equipment dismantling operation and the melting of scrap lead to produce ingots, however proof of this activity has not been submitted to the Agency.

Hazardous Wastes Generated

Acidified Water - D002 Generated from the cleansing of acid tanks, pipes and tank trucks with warm water until the pH reaches 5. Some times the absorbing towers #2, #5 and the oleum tower are washed with warm water that was previously heated in tanker cars with soda ash added so that the pH is lowered prior to entering the pre-treatment system. Mostly the tank cars are washed with warm water which is connected by hoses to the trench system which leads to the sump and eventually to the pre-treatment system. When the sump is filled to a certain level the waste is released to the pre-treatment system where magnesium hydroxide is added to adjust the pH. 150 gallons flow through the pre-treatment system whether or not waste is being neutralized. Neutralized water is released to the surface impoundment. Approximately 10,000 gallons are generated per day.

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Filter Cartridges - D002. The cartridges are used to filter out metal iron sulfate solids from the finished acid product. The acid is pumped into a trough where it is filtered either prior to storage or after storage on its way to transport trucks. The cartridge can last anywhere from one week to one month. It is then neutralized in a container where caustic is added and soaked for 24 hours. Approximately 250 cartridges are used every year.

Aluminum Chloride Filter Cake - D002. Generated during the production of aluminum chloride. Hydrogen peroxide and activated carbon (Norit) is added to the aluminum chloride product which has a high iron content. The norit absorbs the iron. The norit is filtered using a filter press. The pressed norit is added to a fiberglass tank which contains soda ash. The filter cake is neutralized and dried in the sun prior to being landfilled. The liquid is sent to the pre-treatment system to check the pH and iron content and is eventually sent to the surface impoundment.

Non Hazardous Wastes Generated

Ferric Hydroxide Sludge - Sludge from the surface impoundment where iron settled out of the neutralized wash water prior to being discharged to MSD. Iron is in the wash water because some of the equipment is made of iron. the sludge is dried next to the impoundments prior to being landfilled at CID. The last manifested shipment was 6-17-88 and was ten cubic yards. Approximately 1000 cubic yards on site.

Neutralized Filter Cartridges - Generated by neutralizing D002 fiber cartridges in a container by adding caustic and soaking for 24 hours. Disposed of in a general refuse dumpster. Approximately 250 cartridges are neutralized yearly.

Waste Oil - Generated as part of equipment maintenance. The oil was analyzed October 10, 1988 and was determined to have a flash point greater than 200. Approximately 6 drums are generated yearly. There were 3 drums on site. The waste oil is reclaimed by Safety Kleen in Griffith, Indiana. The last shipment was 10-13-88.

Aluminum Chloride Filter Cake - Neutralized filter cake which is dried in the sun prior to being landfilled at CID. There was approximately 20 cubic yards on site. The rate of generation varies with how much aluminum chloride is produced. The last shipment was 8-17-88 and was landfilled at CID.

NOTE #1: Corroded drums of catalyst used in making sulfuric acid were discovered in an on-site warehouse. The catalysts had been stored in the drums for an estimated two years. Approximately six months ago the catalysts were moved from their original warehouse to their present location. According to facility personnel, a leaky ceiling caused the catalyst to corrode the containers. The facility has been advised that a follow-up inspection will be conducted to assure that the warehouse has been cleaned up. The catalyst is sold to Strat Corporation in Hot Springs, Arkansas for metal (vanadium) reclamation.

Hazardous Waste Units

SO1 Storage in Containers. This unit was originally for storage of used lubricating oils which was assumed to be ignitable. Analysis has shown this is not the case. The facility requested that this unit be withdrawn on 8-19-88.

One drum of sodium bichromate was found to have been stored between 1982-1985. On May 26, 1989, EDG decided that the facility did not have to go through closure for this one drum.

SO2 Storage in Tanks. This unit was intended for storage of sodium bisulfite waste. Since the facility purchased the plant in 1981, sodium bisulfite has been sold as a by-product and intentionally produced when not enough is generated as a by-product of the sulfuric process scrubbers. The facility requested that this unit be withdrawn on 8-19-88.

TO4 Treatment in Containers. Sulfuric acid filter cartridges are neutralized in a container prior to being disposed of in a general refuse dumpster. This process is exempt under 725.101(c)10 as elementary neutralization. Withdrawal was requested on 8-19-88.

SO4 Storage in Surface Impoundment. A closure verification was conducted on 8-11-88 and the unit was determined to be closed in accordance with an approved closure plan. Acidified water is neutralized prior to placement in the impoundment. Permits section has not yet certified closure. Apparently high levels of lead were discovered beneath the impoundment which is holding up closure certification. Hazardous waste storage is not presently taking place in the surface impoundment.

Apparent Violations

There were no apparent violations.

CAG:bh:3873B